



A MULTI-PHASE ASSESSMENT OF THE EFFECTS OF COVID-19 ON FOOD SYSTEMS AND RURAL LIVELIHOODS IN ZIMBABWE

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This country report forms part of a series presenting results from three rounds of mixed-methods, comparative assessments conducted by the APRA Programme on the effects of COVID-19 on local food systems and rural economies covering over 800 households and 65 key informants in eight countries (Ethiopia, Ghana, Kenya, Malawi, Nigeria, Tanzania, Zambia and Zimbabwe), beginning in June-July 2020 and ending in May-June 2021.

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Key findings

- Results reveal that the complex dynamics triggered by the COVID-19 pandemic and associated lockdown measures have resulted in disruptions in food systems, including disruptions to input supply chains (seeds, fertilisers, veterinary drugs, agro-chemicals) and produce markets, as well as compounding challenges in accessing critical services such as tillage, agricultural extension and hired labour.
- Disruptions on the local markets have also seen a rise in the cost of agricultural inputs, as well as an increasing cost of grains and other food stuffs. These disruptions have created conditions for a worsening livelihoods situation in smallholder farming communities, including the potential to lower food production and productivity, and exacerbate the key pillars of food security, especially access and stability.
- The impacts of the pandemic on social dynamics were quite evident, particularly on the participation of school-age children in household activities. A significant number of households reported that their children were increasingly involved in farming activities as well as other household activities when there were school closures as a result of the pandemic. The degree of children's engagement in farming activities and household work dipped during the second-round survey (October 2020), when the government had relaxed lockdown conditions and allowed the partial re-opening of schools, before rising again during the third survey (February 2021).
- Throughout the three rounds of assessments, a significant number of households have reported worsening livelihood situations, particularly due to a combination of loss of income from household enterprises and limited off-farm work, reduced availability and rising cost of grain and other food items, as well as a general rise in the cost of living due to supply chain disruptions.
- Generally, the pandemic has exposed the serious lack of resilience in the smallholder farming system, as farmers struggled to cope with the shocks induced by COVID-19 especially in the absence of external support and safety nets.

1. Introduction

The COVID-19 pandemic has continued to affect agri-food systems around the world and lay bare its fragility, worsening the welfare of millions of smallholder farmers whose livelihoods are anchored on agricultural activities (Adhikari et al., 2021; Goswami et al., 2021). The impacts of the pandemic have been devastating, not only for food systems, but the economy as a whole – both directly through the debilitating toll on human health and indirectly through complex dynamics triggered by lockdown measures. The adverse effects are being manifested across Africa's food systems, disrupting the functioning of key supply chains, and jeopardising farmers' access to production inputs and produce markets. Further socio-economic impacts are exacerbated by disruptions in labour markets, the decimation of livelihoods of poor and marginalised groups, as well as increased distress sales of productive assets to cope with income losses. As a result, global outlook reports (Development Initiatives Poverty Research, 2020) indicate that the food security situation has worsened as a result of the pandemic. For the vast majority of sub-Saharan Africa, COVID-19 has coincided with a number of other macroeconomic shocks, which have also exacerbated the impacts of the pandemic on food security, nutrition and general livelihoods, as well curtailed policy responses and mitigation strategies.

In Zimbabwe, the COVID-19 pandemic struck at a time the country was experiencing a worsening economic and humanitarian situation. The July 2020 Zimbabwe Vulnerability Assessment Committee rural assessment report (OCHA, 2020) revealed negative nutrition outcomes, with about 5.5 million people estimated to be cereal insecure at the peak of the hunger season. Rising inflation had continued to erode purchasing power and affordability of food, and was thus effectively undercutting households' ability to access diversified diets.

Zimbabwe enforced its first lockdown on 30 March 2020 in an attempt to contain the further spread of the deadly virus. On that day, the Ministry of Health and Child Care had officially recorded eight confirmed cases and a single death. The government had declared the COVID-19 crisis a national disaster a few days earlier, on 27 March 2020, allowing it to focus state resources towards fighting the pandemic. Several statutory instruments and a raft of measures were developed to support the lockdown, which closed most sectors of the economy, including informal markets, while allowing only a few 'essential services' to operate. The lockdown measures were gradually eased as new epidemiological outlooks and surveillance reports from

the Ministry of Health and Child Care were released, but was then extended indefinitely on 16 May 2020.

By 21 July 2020, the cumulative number of confirmed cases was 1,820 with 26 deaths in total, and on 30 October 2020, Zimbabwe had 8,362 confirmed cases, including 7,884 recoveries and 242 deaths. As the curve was seemingly flattening, the economy started opening up before a new and more virulent variant then emerged from neighbouring South Africa, and cases peaked in the country over the December holidays. By 28 December 2020, Zimbabwe had 13,148 confirmed cases, including 10,705 recoveries and 354 deaths. On 5 January 2021, the government imposed a 30-day lockdown as it battled to contain the spread of the new variant. By 7 May 2021, the country had 38,403 confirmed cases, including 36,041 recoveries and 1,576 deaths.

Since the onset of the pandemic, several assessments have been undertaken, including the Social Accounting Matrix multiplier models, to simulate the economic costs of COVID-19 and measure its impacts on food security, agri-food systems and agricultural markets (Arndt et al., 2020; Mohamed et al., 2021; Nechifor et al., 2021). However, these global and country-level analyses provide limited insights on localised dynamics and coping mechanisms, including changes in labour participation and consumption patterns, as households adapt to changes in their economic environment. This study, therefore, focused more on community and household dynamics and response measures to cope with the pandemic. This paper presents a summary of findings emerging from a series of rapid assessment studies undertaken by the Agricultural Policy Research in Africa (APRA) Programme in Mvurwi and Concession areas of Mazowe District in Zimbabwe to examine how COVID-19 is affecting food systems and rural livelihoods in our research communities. The research was conducted over three waves of assessments, the first in June-July 2020, the second in October 2020 and the third round in February 2021. We have been tracking a sample of around 100 smallholder farmers to assess how their farming and other livelihoods activities have been affected by the pandemic, especially due to lockdown measures. Our assessments were complimented by in-depth key informant interviews that elicited views from community leaders, agricultural extension officers and local government officials to get an overview of how the livelihoods situation has been unfolding following the outbreak of the pandemic and how communities have been coping with, and responding to, the restrictive lockdown measures.

The rest of the paper is organised as follows. Section 2 provides an overview of the data used in the study,

including a brief description of the study sites and study design. Section 3 gives a general overview of the social dynamics triggered by COVID-19, including changes in household responsibilities and community coping mechanisms, as well as their access to social support. Section 4 examines the impacts of the pandemic on agricultural activities, mostly focusing on households' ability to engage in farming operations, their access to critical production inputs and services, as well as access to markets. Section 5 examines the households' food security situation, looking at how the pandemic has affected the availability and cost of food available through local markets, as well as households' perception of food insecurity experiences as measured by the Food Insecurity Experience Scale (FIES). Section 6 examines the overall impacts of the pandemic on household welfare and poverty situation. Finally, Section 7 summarises the paper with a synthesis of key messages, policy implications and recommendations emanating from the study.

2. Data

The study was carried out in Mvurwi and Concession farming areas in Mazowe District, Mashonaland Central Province, where two farming models have emerged: small-scale A1 and larger-scale A2 farms, which are producing mostly maize and tobacco, along with other cash crops such as groundnuts and soybeans. Our sample farmers were drawn from three farming schemes in Mvurwi (Stockbury, Lucknow Estate and Chipanza) and two farming schemes in Concession (Glengrey and Falling Waters). Livelihoods in these farming communities are mostly anchored on agricultural activities, where households with access to land engage in different crop and livestock enterprises, while others hire out their labour services to surrounding large-scale commercial farms for key operations such as tobacco weeding and curing. There is also a great deal of marketing activities, through informal and formal channels including tobacco sales to decentralised auction floors. Maize is mostly sold through the government aggregator, the Grain Marketing Board, as well as through traders who visit communities from nearby towns, while vegetables are sold via local markets or to restaurants, or are ferried to distant lucrative markets as far away as Harare, which is approximately 100km from the district. With COVID-19 and the associated lockdown measures, these communities were likely to have experienced disruptions to their production and marketing activities.

Our analysis is based on data drawn from a combination of households' surveys and key informant interviews. Respondents for the household interviews were sampled from the list of households who were

previously surveyed as part of APRA panel studies and longitudinal studies that examined the pathways of agricultural commercialisation and their differentiated impacts on livelihood security among smallholder farmers in the same study areas, carried out during 2017–2018. The original APRA studies were mixed-method analyses, combining detailed household surveys with extensive qualitative research. The selection of villages and local informants for the studies followed a rigorous approach using common guidelines and were meant to be representative of study areas that included highly commercialised households. For the current rapid assessments of COVID-19 impact studies, we adopted a multi-stage sampling approach to ensure that our sample included a reasonable proportion of female- as well as male-headed households throughout the three rounds of surveys. In total, 107 households (82 males, 25 females) were interviewed during the first-round survey (June and July 2020), 102 households (82 males, 20 females) were interviewed during the second-round (October 2020), while 103 households (77 males, 26 females) were interviewed in the third-round (February 2021).

Key informant interviews were carried out with knowledgeable local officials and community leaders within the study sites, including seasoned extension officers, councillors and officials from the Ministry of Lands, Agriculture, Water and Rural Resettlement. These were meant to compliment the household surveys, and give an in-depth overview of the community dynamics triggered by the COVID-19 pandemic, its effects on key production, marketing and livelihoods activities, and how communities were coping with the restrictive measures implemented by the government. Both the household surveys and key informant interviews were carried out using phone-based interviews in compliance with health protocols during the pandemic.

3. COVID-19 and response measures

In response to the COVID-19 pandemic, unprecedented travel restrictions and lockdown measures were imposed around the world. These measures were designed to reduce the spread of the virus by restricting contacts between infectious and susceptible individuals, and thus help flatten the epidemic curve. Epidemiological studies provided early support for social distancing as an effective instrument for containing further spread of the virus and effectively reducing the odds of the pandemic overwhelming already stretched health care systems (Plümpner and Neumayer, 2020; Nande et al., 2021). However, the complex dynamics triggered by lockdowns have shaped social dynamics at household and community level, including disruptions in social

network structures, increased burden of childcare responsibilities, reduced inter-community mobility, potentially affecting community level trading, as well as disruption of crucial social work activities with a potential to further accentuate inequalities and exclusion of marginalised groups. More complex psychological and social impacts of the pandemic are also reported in other global studies (Saladino, Algeri and Auriemma, 2020).

The education sector was one of the primary casualties of the COVID-19 pandemic. The Government of Zimbabwe had to close schools because of the potential difficulty of enforcing social distancing among pupils and students, especially given that these learners often share facilities such as desks and equipment due to limited resources. The closure of schools presented new challenges for parents in terms of how to manage their children's continued learning as they also participated in other household activities.

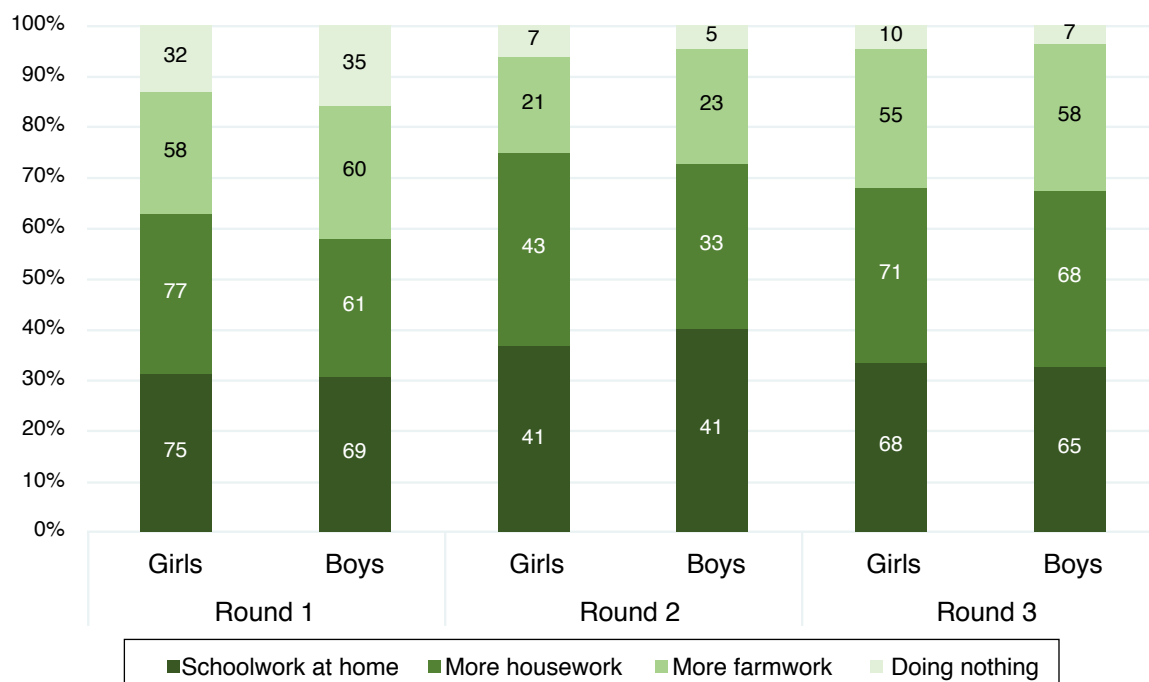
Figure 1 shows the distribution of the main activities among boys and girls during the COVID-19 crisis. Throughout our surveys, we noted that school-age children were increasingly incorporated into ongoing household activities, including participating in more chores at home and farm work, as households strived to make ends meet during the pandemic. During the first survey, about 77% of respondents reported that girls were engaged in household work activities, while

the corresponding number for boys was 61%. An interesting trend in our analysis was that the degree of children's engagement in farming activities and household work dipped during the second-round survey (October 2020) before rising again during the time of the third survey (February 2021). This is probably because the second-round assessment was carried out at the time when lockdown conditions had been relaxed and there was partial re-opening of schools, with priority being given to exam classes.

Overall, we did not see any major differences in the distribution of key tasks between boys and girls. It is also interesting to note that children continued to be involved in school work while at home, which was made possible by the adoption of online and digital learning platforms by schools, which enabled them to send assignments to pupils, although issues of accessibility of materials remained a key challenge due to the high costs of the internet.

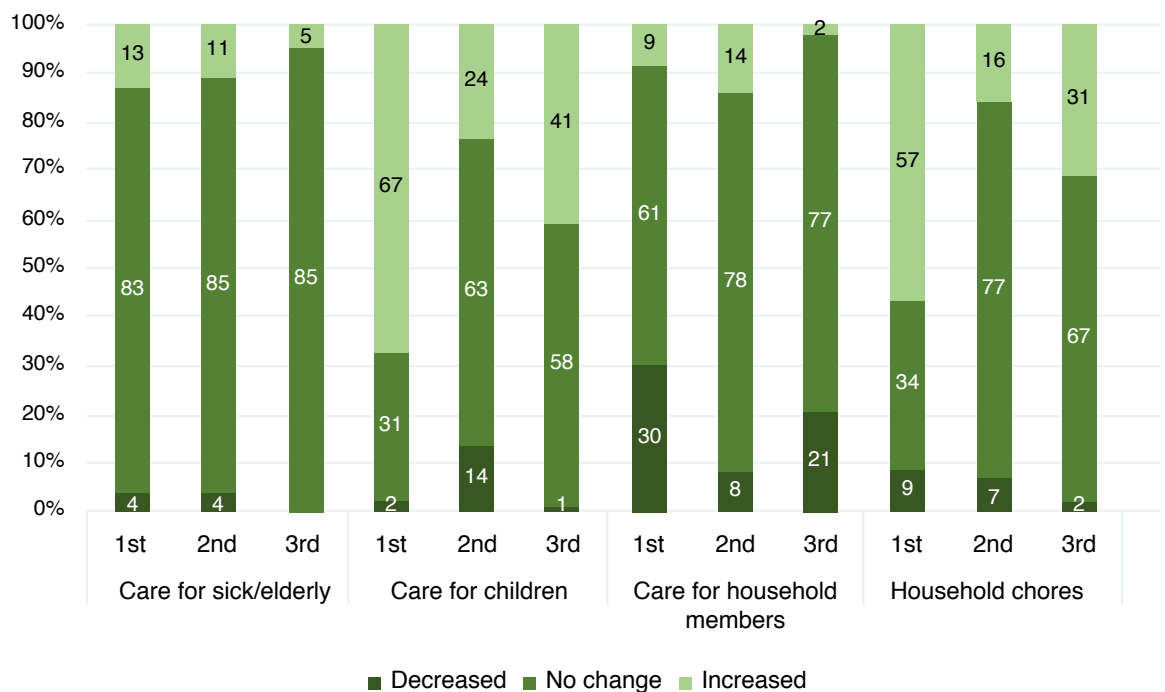
The COVID-19 pandemic and related containment measures are expected to have an impact on intra-household dynamics as well as heightened caring responsibilities within households. However, throughout our surveys, most of the respondents reported that daily responsibilities in terms of caring for sick and elderly people, children, other family members including friends, and general household work, had largely remained unchanged (**Figure 2**).

Figure 1: Children's activities at home after school closures



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 2: Changes in responsibilities within households



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

We also asked respondents whether they had received any form of assistance from various sources, either from within or outside the villages. Overall, the majority of respondents reported that they did not receive any form of assistance from any sources to help them cope with the worsening livelihood situation. The proportion of respondents reporting a lack of support rose from 64% during the first round to 86% during the second and third round of surveys. About 15% of the respondents reported receiving some government assistance during the first round, although this number fell significantly to 4% during the second and third round surveys. Key informants confirmed that there was generally a lack of government programmes to support communities during the pandemic, either through safety net programmes or at least the provision of protective equipment to health workers and extension officers, which left these frontline personnel exposed to the virus. However, some informants noted the pivotal role played by non-governmental organisations in supporting communities through livelihood programmes.

4. Impacts on agricultural production and marketing activities

4.1 Participation in agricultural activities

COVID-19 reduced the general availability of and access to food through disruption in production activities as well as loss of livelihoods and incomes.

Agricultural production activities were curtailed by the initial strict lockdown restrictions that were triggered by the uncertainty surrounding the nature of the spread of the virus. During the first round, 58% of the farmers reported that COVID-19 decreased their ability to engage in farming activities, while 47% reported that the pandemic decreased the ability of their spouses to engage in the same activities. However, under growing pressure, and as the prolonged lockdown started to take a toll on food production, the government allowed farming activities to resume, including land preparation for field crops such as maize and tobacco, and re-opened fresh vegetable markets, such as Mbare Musika in Harare, on condition that farmers kept observing the health guidelines. During the second round, the same number reported the negative impact of COVID-19 on farm participation while the number eased to 28% at the time of the third round of assessments.

One of the biggest impacts of the pandemic has been the disruptions in labour markets. During the first round, about 45% of respondents reported that they were unable to hire labour services for their farming activities. The number, however, fell to 16% during the second round, and 18% during the third round of assessments. The labour shortages led to an increase in the cost of hiring labour services for critical farming activities, potentially exerting an upward pressure on the costs of production. During the first round of surveys, 48% of farmers reported that the cost of hiring day or casual labour had gone up during the COVID-19

crisis. The number slightly fell to 42% during the second round, but sharply increased to 62% during the third round of assessments as this coincided with the peak of the farming season where demand for labour services is much higher than normal. The disruptions in labour supply increased the risk of post-harvest losses, especially for time-sensitive operations such as soybean harvesting. Studies have also shown how disruptions in labour supply due critical periods such as planting have had serious impacts on production and food security in sub-Saharan Africa (Ayanlade and Radeny, 2020). **Figure 3** shows changes in the costs of hiring labour services across different labour categories.

4.2 Agricultural marketing

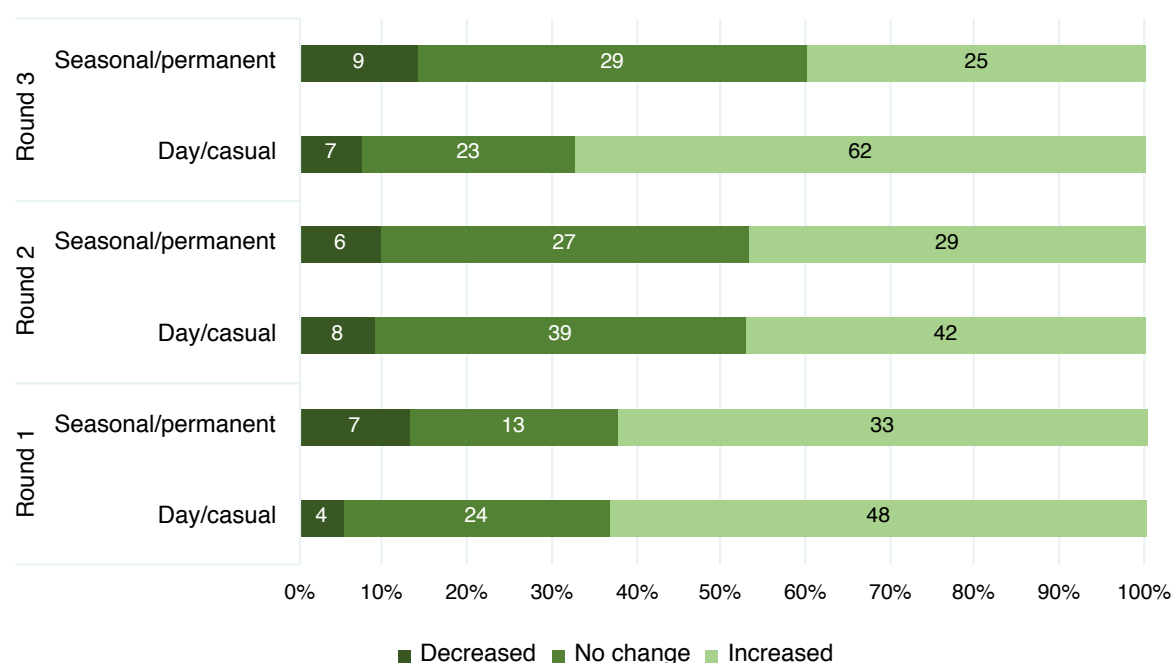
Changes in marketing behaviours and patterns are largely a manifestation of the debilitating effects of the movement restrictions that were imposed by the government at the onset of the pandemic, which caused significant disruption to transportation and logistics services involved in getting farm produce to the market. The immediate impact of these disruptions was limited availability and rising cost of hiring transport to ferry agricultural produce, which thus limited farmers ability to access different marketing channels. We examined how COVID-19 and the associated lockdown restrictions affected farmers' ability to hire transport, the cost of transportation services as

well as the general ability of traders and brokers to access farming communities for the purpose of buying agricultural produce. **Figure 4** gives an overview of how the pandemic affected farmers' ability to access different marketing channels for their produce.

During the first round of rapid assessments, 73% of the respondents reported that they could still hire transport to take their produce to the point of sale, although the majority (71%) noted that the cost of transportation had gone up. During the second round, the lockdown restrictions were relaxed a little bit following a decline in the number of cases and a significant drop in local transmission rates. As a result, about 98% of respondents reported that they were able to hire transport, and only 34% indicated that the cost of transportation had gone up. However, during December 2020, Zimbabwe saw a surge in the number of new cases linked to a new variant, triggered by an influx of returning residents coming from South Africa to celebrate the Christmas holidays. In response, the government further tightened lockdown measures, and the number of people reporting an increase in the cost of transportation rose from 34% in the second round to about 62% during the third round of assessments.

COVID-19 and the lockdown regulations affected the ability of buyers and brokers to visit communities and purchase produce directly from farmers. During the initial assessment, about 94% of the respondents

Figure 3: Changes in Costs of hiring labor services



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

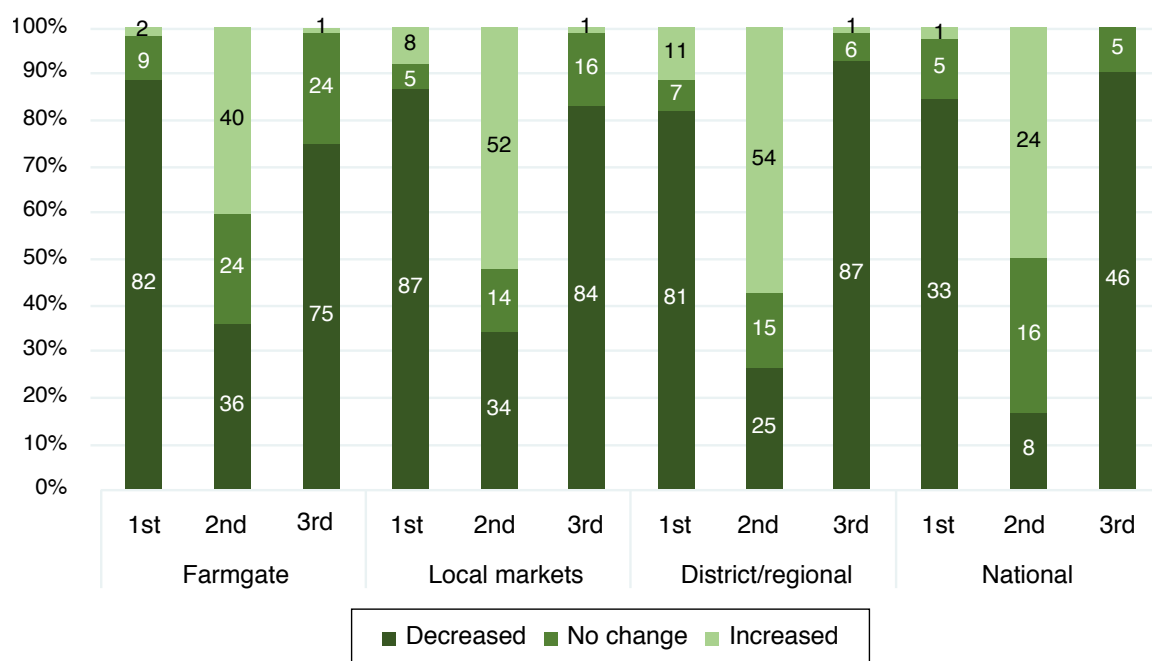
"I am into horticultural production, mainly tomatoes and cabbages. Before COVID-19, I was producing about 20,000 heads of cabbages per cycle. However, I had to reduce my production to only 2,500 heads per cycle because COVID made it extremely difficult to find a market for my produce. I am not making anything out of the cabbages and I can no longer afford to hire labour. I used to hire about 20 people for my production activities, but now we have been forced to reduce acreage and make use of the family labour available. I have completely stopped producing tomatoes because of a lack of market. I used to produce about 15t of tomatoes per cycle but have since stopped production. I once had a challenge getting my tomatoes to Harare during this crisis. Transporters are now charging us in United States dollars because fuel is selling in US\$. I had to fork out US\$70 for transport alone, only to get US\$84 after selling my tomatoes. It was a huge loss for me and I returned home without even buying groceries for my family."

Farmer, Ward 27, Mvurwi

reported a decrease in the number of buyers coming into the communities to buy produce directly from farmers. However, the proportion of respondents reporting this decline went down to 75% during the second round of surveys, probably due to the slight relaxation of lockdown conditions, although it went up again to 81% during the third round, reflecting the further tightening of lockdown restrictions.

Tobacco was one of the major crops that suffered from the early consequences of the pandemic. The COVID-19 crisis coincided with the beginning of the tobacco marketing season in Zimbabwe and, as a result, marketing of the golden leaf crop experienced some disruptions. First, the official opening of the auction floors was delayed by about a month as authorities sought ways to minimise the risk of spreading Coronavirus at the usually congested auction floors. As the floors eventually opened, several measures were put in place to minimise human traffic at auction floors, while the regulatory authority, the Tobacco Industry and Marketing Board (TIMB), was also encouraging contract farmers outside Harare to make use of selling points provided by their contractors in their respective provinces. Farmers were not allowed to physically attend sales, and instead had to nominate a TIMB-registered grower representative to negotiate and make decisions on their behalf. Farmers were not happy with this

Figure 4: COVID-19 impacts on marketing prospects through different channels



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

arrangement, and felt short-changed by not being able to have full control over their own sales.

4.3 Availability of agricultural services

Agricultural production and food supply chains have felt the negative impacts of COVID-19, particularly due to the restrictions imposed by the national lockdown. The pandemic created massive disruptions in supply chains, which affected the timely distribution and delivery of key farm inputs and access to critical support services. The immediate impacts of disruptions in input distribution channels have been the limited availability of production inputs such as fertiliser, seeds, pesticides, herbicides, veterinary drugs, as well as a general increase in the prices of these inputs due to demand pressure. Due to general restrictions on inter-city and international travelling, local input suppliers have not been able to restock their inputs and agrochemicals. As a result, local agro-dealership shops have been running low and some of them have closed due to a lack of business. During the first round survey, 88% of the farmers reported that the price of farm inputs had generally increased during the COVID-19 crisis. The proportion slightly dropped to 77% during the second round. By the third round, 68% of farmers reported that the cost of farm inputs in general had increased due to the dynamics triggered by lockdown measures. Although we did not measure this during the assessments, the likely impact of disruptions to input supply chains, and the rising cost of basic inputs, was a contraction in cultivated area as well as significant drop in crop productivity, which will have far-reaching

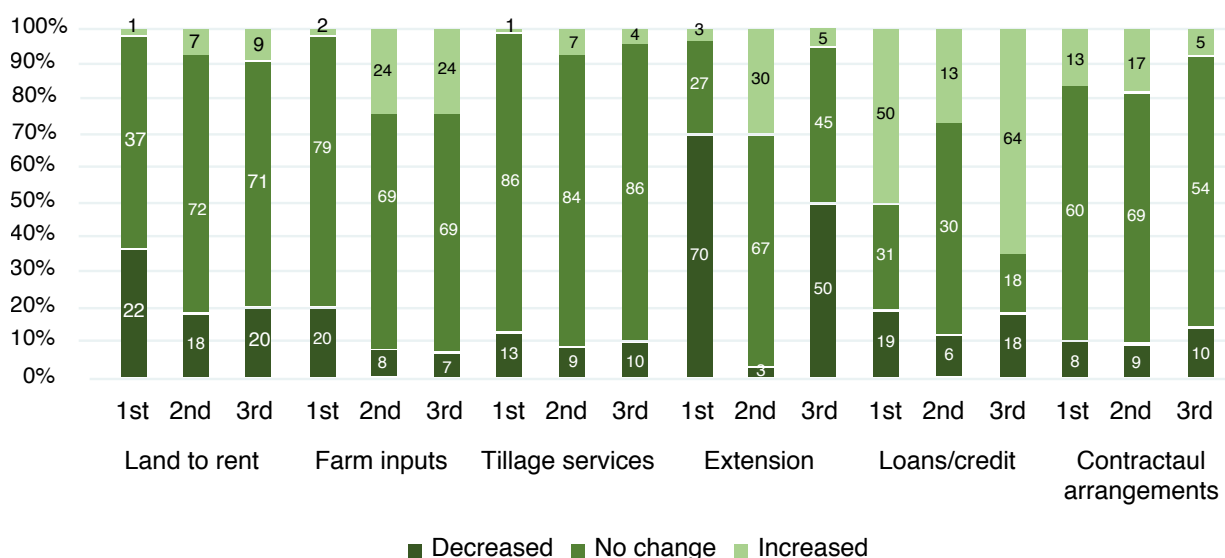
"Some egg producers have had to sell their layers because they failed to secure feed concentrates for their birds. The farmers usually purchase poultry supplies from town, but a lockdown restriction made accessing feed difficult. There is a lady here who ended up slaughtering her entire flock of layer chickens and sold them for meat so that she could cut her losses."

Extension officer, Mvurwi, Mashonaland Central

consequences on farm incomes and household food security. **Figure 5** summarises the changes in the availability of other key agricultural services triggered by COVID-19.

Agricultural extension is one of the critical services most affected by the COVID-19 pandemic. Farmers' access to crucial advisory services was negatively affected by the restrictions on movements and the insistence on social distancing which saw the banning of community gatherings that have traditionally provided a platform to convey extension messages. During the first round of assessments, 70% of respondents reported that the availability of extension services was reduced during the pandemic, probably as extension officers were also very reluctant to offer face-to-face training as they complained about a lack of protective clothing. However, the situation improved by the time of the

Figure 5: Availability of services for agricultural production



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

second-round surveys as the country was opening up and the economy slowly get back to normal. Unfortunately, as a result of the new variant and tighter restrictions, the extension situation had worsened again by the third round, with 50% of respondents reporting that availability of critical extension services had decreased.

The pandemic also negatively affected the availability and cost of tillage services. During the first round, 13% of farmers observed that COVID-19 and lockdown measures had led to a reduction in the availability of tillage services. As a result, 64% of respondents reported that the cost of tillage services had gone up drastically. This was compounded by a fuel crisis, epitomised by erratic supplies, and most service stations were only accepting United States dollars, which affected the availability of motorised tillage services. Restrictions on movements have also made it extremely difficult for farmers to access veterinary drugs, which normally come from established retailers in big towns. This saw a surge in tick-borne and other livestock diseases, leading to the death of cattle, and thus negatively affecting the availability of draught power, which normally compliments tractor tillage services. By the time of the third-round surveys, 36% of respondents had noted that the price of tillage services had generally increased.

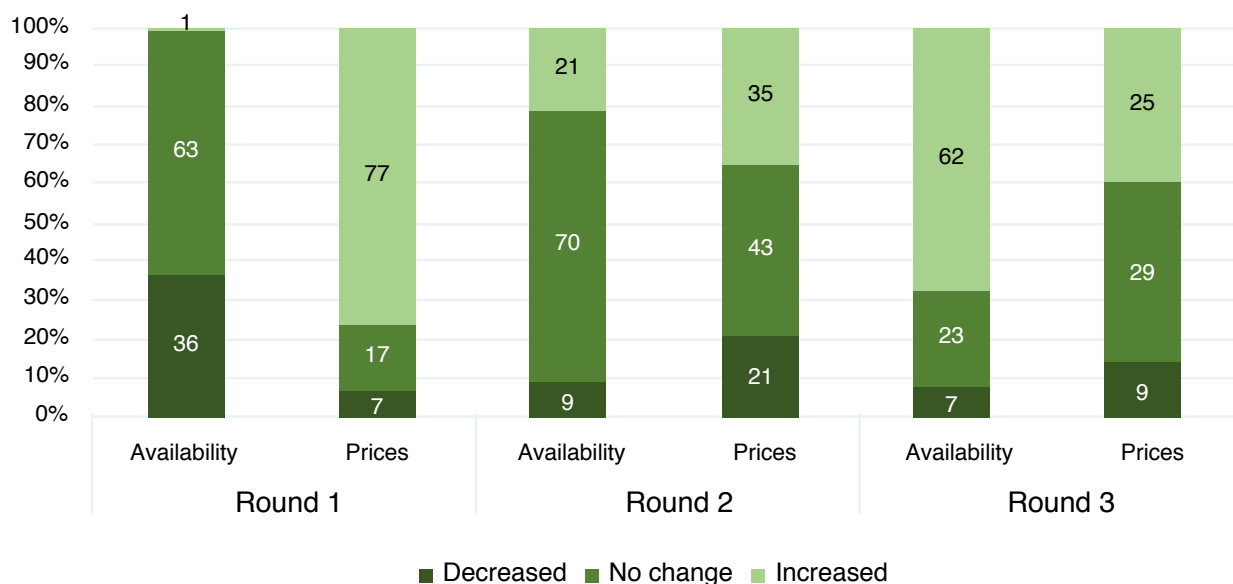
In terms of financial services, it is noteworthy that farmers have observed a decrease in the availability of credit and loans from banks and financial institutions as well as a

decline in the availability of contractual arrangements for their main crops. Contract farming has played a catalytic role in agricultural commercialisation among smallholder farmers in Zimbabwe, helping offset the debilitating effects of liquidity constraints through granting farmers much-needed production finance, as well as providing access to advisory services and remunerative markets for produce (Scoones et al., 2018). A decline in the availability of these services will not only affect agricultural commercialisation, but may also affect both agricultural productivity, due to limited use of improved inputs, and total production, due to contraction in total cropped area.

5. Food and nutrition security

COVID-19 affected local food availability through disruptions in input supply chains to support local production, while restrictions on inter-city movements limited grain arbitrage activities, thus causing local shortages. About 36% of the respondents reported that the availability of grains reduced and 77% reported that the cost of grain had gone up on the local market during the first round surveys. However, the severity of the grain availability problems eased by the time of the second round, with the proportion of respondents reporting that grain availability had decreased falling to 9%, probably a reflection of the positive impact of the easing restrictions on the movement of grain. Generally, we found that in this round, a majority of respondents reported reduced availability and increased prices of several food items on the local markets. **Figure 6** gives

Figure 6: Changes in the availability and prices of grain on the local market



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

a summary of the changes in the grain market, while Appendix A provides an overview of changes in the availability and price of basic food items.

The pandemic has also affected people's access to food through disruptions in livelihoods and income-generating activities. Although the welfare of smallholder farmers in these contexts is almost exclusively anchored on agriculture, they also rely on household enterprises and other income-generating activities to augment household incomes and cushion themselves against livelihood shocks. However, with COVID-19 and the associated lockdown restrictions, the propensity to engage in these activities was severely diminished. During the first round of surveys, 14% reported that the pandemic had affected their ability to access off-farm work within their village. The number rose to 35% during the second round and 34% in the third round. About 42% reported that the pandemic reduced their participation in household enterprises that had traditionally helped them to earn a living. This has a negative bearing on households' purchasing power, potentially affecting their ability to access different kinds of food groups needed to maintain healthy diets. Although not an explicit focus of this study, we project that the negative income effects will be greater among farm workers who suffered job losses due to the contraction in agricultural activities.

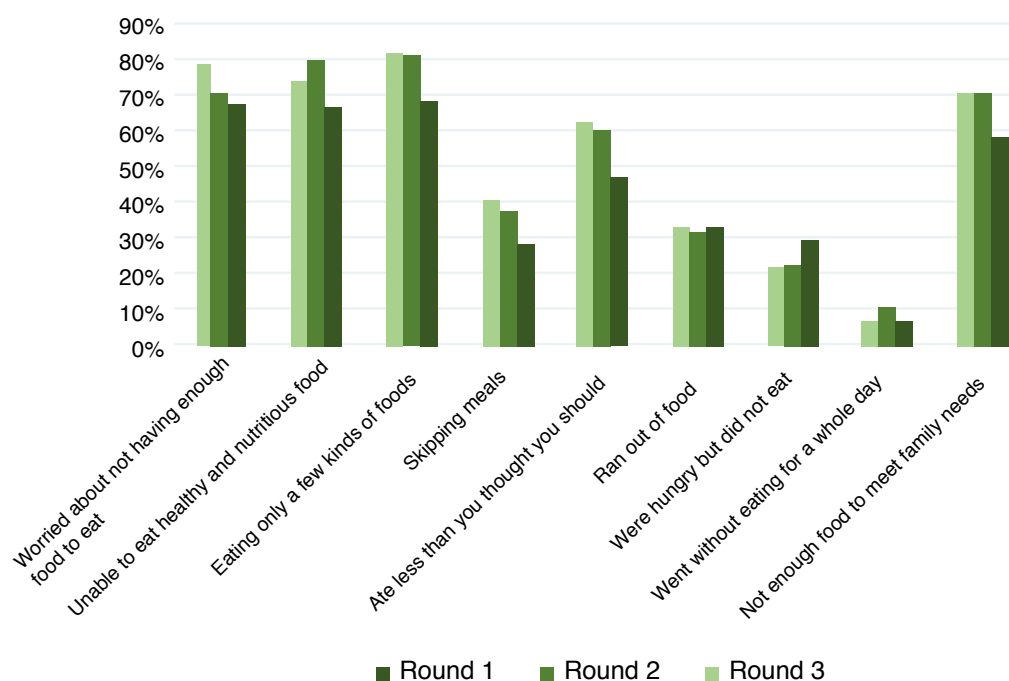
To get an in-depth understanding of how the COVID-19 pandemic has impacted the key dimensions of food

"Farm workers are really feeling the hit of this crisis. Those who didn't produce enough maize for themselves are finding it difficult to secure grain from the market because it is either unavailable or people are selling in United States dollars. The farm workers used to get maize from farmers as payment for their labour services, but people are no longer hiring lots of labour because they have reduced their scale of operation."

Councillor, Mvurwi

security, we asked the respondents about their experience of food insecurity. The assessment was carried out using the Food and Agriculture Organization of the United Nations' FIES, where individuals were asked to respond to eight brief questions regarding their access to adequate food and a score was computed to depict the severity of food insecurity at the household level. The FIES metric ranges from zero to eight, with households scoring zero being the most food secure while those scoring eight the most food insecure. The overall score was 4.01 during the first round, 3.97 during the second round, and 3.50 after the third round of assessments. This generally indicates the gradual easing of food insecurity

Figure 7: Household food security experiences



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

severity, as perceived by households, over the three rounds. It is noteworthy, however, that the third-round assessment came at a time households were harvesting their produce including most food crops such as maize and groundnuts. **Figure 7** summarises households' experiences across the various aspects of food insecurity.

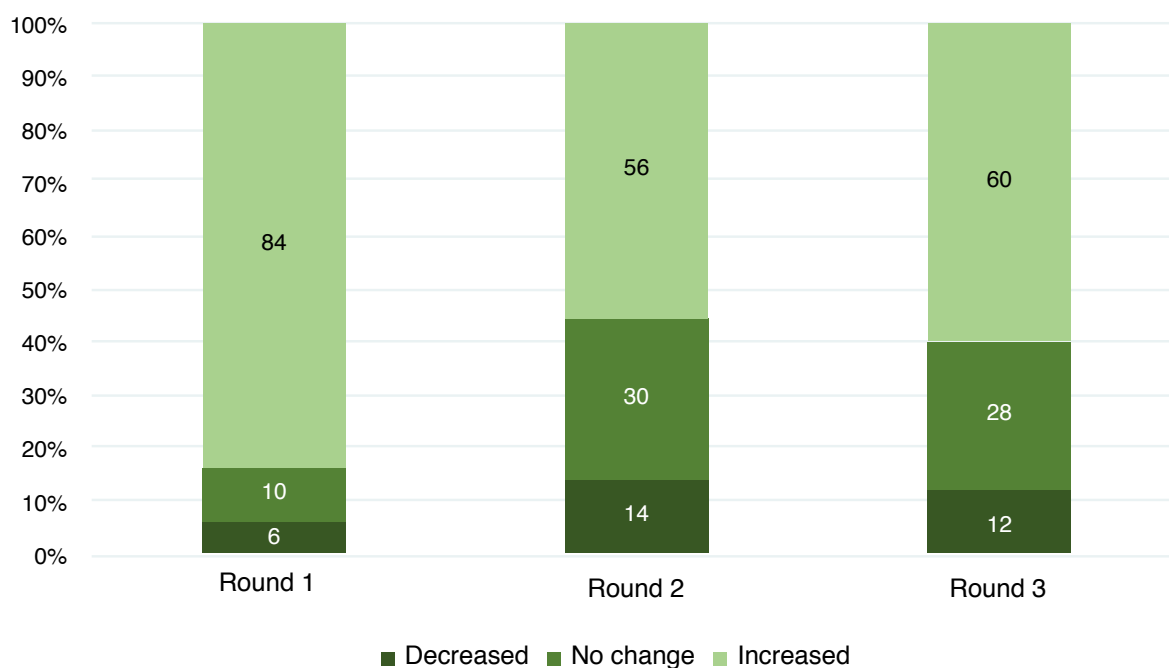
6. Poverty and general households' welfare

The COVID-19 pandemic has caused massive shocks to economic systems through its impacts on production and supply chains. It has had far reaching impacts on consumption and poverty among low-income households in farming communities. The immediate economic impacts at household level have mainly come through the loss in income from household enterprises and limited off-farm work, loss of employment opportunities due to disruptions in labour markets, as well as a general loss in discretionary spending due to livelihoods disruptions. The disruption of production activities, and decimation of livelihoods activities, meant that COVID-19 has negatively affected the availability and prices of food items available in local markets. As a result, 84% of respondents reported that the cost of living had gone up since the onset of the pandemic. By the second round of surveys, 56% of respondents noted that the overall cost of living had

gone up, while this proportion reached 60% during the third round of assessments. **Figure 8** shows households' perception of how their overall cost of living has been affected by the pandemic crisis.

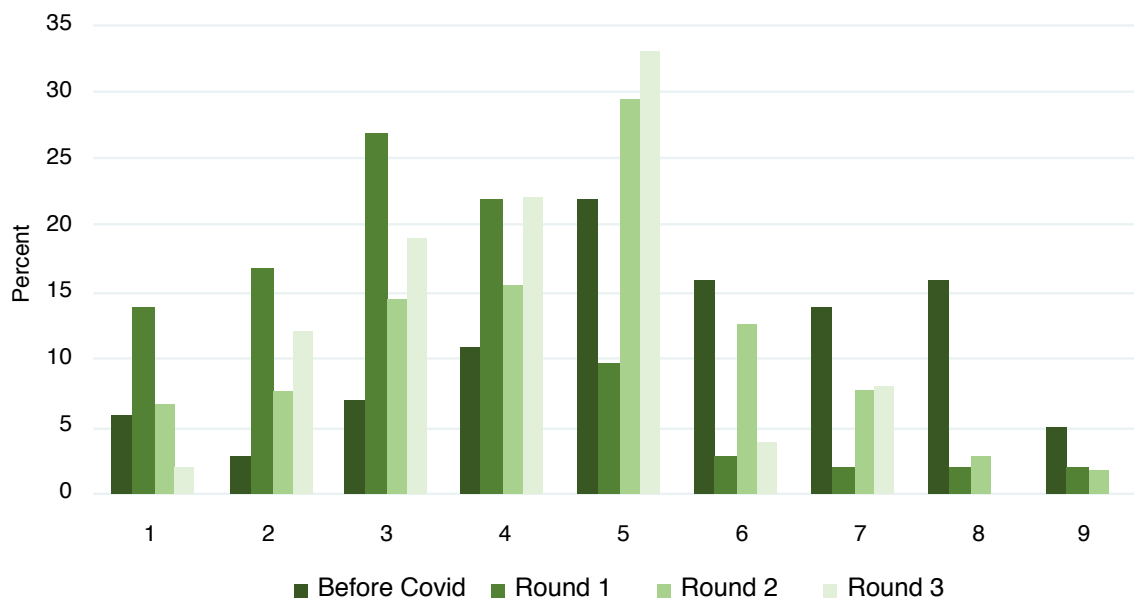
To understand the broad socioeconomic impacts and how the COVID-19 pandemic has affected community livelihoods in general, we asked respondents to give an assessment of the overall welfare situation before and after COVID-19 and their perceptions about the control they felt they had over their own life. We employed the nine-step ladder approach (Ravallion, 2012), where those on Step 1 feel totally unable to change their life, while those on Step 9 believe they have full control over their own life (**Figure 9**). Overall, households generally considered themselves worse off due to COVID-19 than they were before the pandemic, as depicted by their positioning in the lower steps of the ladder (i.e., Steps 1-4). Throughout the three rounds of surveys, the cumulative percentages of respondents reporting scores of four or less (the less desirable classes) were 83%, 45% and 55%, during the first, second and third rounds of surveys, respectively, which are all higher than before the COVID-19 era (27%). Conversely, the cumulative proportion of farmers reporting higher scores of five or better was highest for the pre-pandemic era (73%), compared to the first (17%), second (55%) and third (45%) rounds of assessments. These results suggest that households were reporting higher perception scores at the time of the third round

Figure 8: Overall changes in cost of living due to COVID-19



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

Figure 9: Household perceived control over own life



Source: Own calculations from APRA COVID-19 Rapid Assessment Surveys

(February 2021) compared to the time of the first-round surveys (June–July 2020). This could suggest that individuals within farming communities are beginning to perceive having more control over their own life, which is attributable to the gradual easing of lockdown restrictions and a good harvest as a result of the good rains received in most parts of the country during 2021.

7. Conclusions and policy implications

APRA has conducted rapid assessments of the impacts of the COVID-19 pandemic on food systems and rural livelihoods in Zimbabwe. It is an attempt to offer more nuanced insights on the socio-economic impacts of the pandemic at community and household level, especially given that most studies on the pandemic have focused on macroeconomic, country and regional level analyses. Our results are based on three ‘snapshot’ household surveys and key informant interviews in one of the country’s high-potential agricultural regions, where changes in market conditions triggered by the pandemic and its lockdown measures are likely to be felt by households whose livelihoods are almost exclusively dependent on farming activities. While it may be premature to make long-term inferences based on the results of these ‘snapshot’ surveys, our analyses reveal important trends and impact pathways through which the pandemic has affected rural households, particularly their ability to engage in farming and marketing activities, access to production inputs, labour market participation and

the key pillars of food and nutrition security (availability, accessibility, utilisation, and stability).

The general result is that the COVID-19 pandemic has had adverse impacts on rural communities, although the magnitude and severity of these impacts varied slightly over the three rounds of assessments and across different households depending on their adaptive capacity and differential access to support services. Overall, while the pandemic poses some serious challenges for agri-food systems, it is also an opportunity to make strategic interventions to bolster the resilience of farming systems and protect incomes and assets of smallholder farmers so that they can emerge from the shocks induced by COVID-19 and effectively participate in economic recovery efforts. The COVID-19 pandemic has made it abundantly clear why transformative changes in food systems are needed. One of the biggest impacts we observed was the disruptions to inputs systems and food supply chains. This points to the need for interventions to support more diverse and resilient input and food distribution systems. Options include strengthening agro-dealer networks and empowering agri-food small and medium-sized enterprises, by addressing their capacity, liquidity and financial constraints so that they can effectively participate in the food systems transformative agenda. Innovations in extension systems are also crucial, such as the use of digital platforms and ICTs, to ensure that farmers have continued access to important advisory services, even during pandemics where human

interactions may be limited. There is also scope for exploring and supporting the Village Based Advisors model as a platform for enhancing farmers' access to inputs and advisory services.

The COVID-19 pandemic and restrictive measures have also resulted in labour market disruptions, especially for the predominantly labour-intensive production systems in rural communities. The pandemic coincided with critical periods within the smallholder farmer's seasonal calendar, such as planting and harvesting, with detrimental effects on both production and post-harvest losses. It is therefore crucial to revive the discussion on smallholder mechanisation options and investments in labour-saving technologies to reduce the drudgery and labour demands of farming operations. It is also important to pay increasing attention to the welfare of farm workers, ensuring that they have access to safe working conditions, protective clothing, as well as social protection to cushion them against livelihood losses triggered by labour market disruptions.

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Appendix A

Table A1: Changes in the availability and prices of food items

	Round 1 (June–July 2020)			Round 2 (October 2020)			Round 3 (February 2021)		
	↓	=	↑	↓	=	↑	↓	=	↑
Availability (%)									
Grains	36.5	62.6	0.9	8.8	69.6	20.6	15.5	76.7	7.8
White roots, tubers, plantains	39.3	54.2	5.6	60.8	26.5	12.8	53.4	33	13.6
Pulses, nuts, seeds	23.4	49.5	3.7	25.5	71.6	1.9	46.6	35	8.7
Milk, milk products	48.6	51.4	0	23.5	72.6	3.9	22.3	74.8	2.9
Meat and poultry	56.1	43	0.9	17.7	67.7	14.7	23.3	70.8	5.8
Fish and seafood	50.5	47.7	0.9	10.8	64.7	24.5	15.5	77.7	6.8
Eggs	49.5	50.47	0	8.8	83.3	7.8	29.1	68.9	1.9
Dark green leafy vegetables	3.7	57	39.3	11.8	43.1	45.1	32	24.3	43.7
Other vegetables	3.7	66.4	28	38.2	32.4	29.4	32	46.6	21.4
Other fruits	15	67.3	9.4	34.3	51	12.8	13.6	52.4	21.4
Processed foods	32.7	67.3	0	85.3	13.7	1	4.9	91.3	3.9
Prices (%)									
Grains	6.5	16.8	76.6	20.6	43.1	35.3	1.9	61.2	36.9
White roots, tubers, plantains	5.6	59.8	33.6	10.78	25.5	63.7	16.5	42.7	40.8
Pulses, nuts, seeds	2.8	43.9	29	1	56.9	42.2	9.7	51.5	29.1
Milk, milk products	2.8	20.6	76.6	3.9	58.8	37.3		75.7	24.3
Meat and poultry	0.9	17.8	81.3	8.8	51	40.2	1.9	63.1	35
Fish and seafood	0.9	15.9	82.2	15.7	62.8	21.6	0	80.58	100
Eggs	0.9	22.4	76.64	2.9	68.6	28.4	0	57.3	42.7
Dark green leafy vegetables	18.7	55.1	26.2	28.4	48	23.5	45.6	34	20.4
Other vegetables	8.4	63.6	26.2	11.8	38.2	50	25.2	57.3	17.5
Other fruits	3.7	55.1	32.7	3.9	44.1	50	19.4	60.2	7.8
Processed foods	0.9	26.2	71	4.9	59.8	34.3	63.1	35	1.9

Note: ↓Decreased; = No change; ↑Increased.

Source: Own calculations from APRA COVID-19 Rapid Assessment Three Rounds

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